

CLAIMS

5 What is claimed is:

1. A method for processing objects within a data processing system in a network, the method comprising:

10 receiving a request message at a first computing device, wherein the request message comprises a source identifier for a fragment;

15 performing a first determination for whether or not the request message has been processed by a second computing device that has a fragment-supporting cache management unit;

receiving a response message at the computing device, wherein the response message comprises the fragment;

20 performing a second determination for whether or not the fragment is to be cached if the computing device can determine that the second computing device has a fragment-supporting cache management unit; and

25 performing a third determination for whether or not to cache the fragment based on the first determination and the second determination.

2. The method of claim 1 wherein the first determination further comprises:

30 retrieving from the request message a message header comprising a directive that indicates that the request

message has been processed by a second computing device that has a fragment-supporting cache management unit.

3. The method of claim 1, wherein the second
5 determination further comprises:

retrieving from the response message a message header comprising a directive that indicates that the fragment is not to be cached by the first computing device if the second computing device has a
10 fragment-supporting cache management unit.

4. The method of claim 3 wherein the response message comprises an HTTP (Hypertext Transport Protocol) Cache-Control header with a private directive.

5. The method of claim 1 further comprising:

in response to the first determination being negative or the second determination being negative, storing the fragment in a cache maintained by a cache
20 management unit within the computing device.

6. The method of claim 1 wherein the source identifier is formatted as a URI (Uniform Resource Identifier).

7. The method of claim 1 wherein the response message is an HTTP (Hypertext Transport Protocol) Response message and the request message is an HTTP request message.

8. A method for processing objects within a data processing system in a network, the method comprising:

receiving a request message at a server, wherein the
5 request message comprises a source identifier for a fragment;

generating a response message comprising the fragment; and

10 inserting in the response message a message header comprising a directive that indicates that the fragment is not to be cached by a first computing device if the first computing device is forwarding the response message to a second computing device that has a fragment-supporting cache management unit.

15 9. The method of claim 8 wherein the source identifier is formatted as a URI (Uniform Resource Identifier).

20 10. The method of claim 8 wherein the response message is an HTTP (Hypertext Transport Protocol) Response message and the request message is an HTTP request message.

11. An apparatus for processing objects within a data processing system in a network, the apparatus comprising:

means for receiving a request message at a first computing device, wherein the request message comprises a source identifier for a fragment;

means for performing a first determination for whether or not the request message has been processed by a second computing device that has a fragment-supporting cache management unit;

means for receiving a response message at the computing device, wherein the response message comprises the fragment;

means for performing a second determination for whether or not the fragment is to be cached if the computing device can determine that the second computing device has a fragment-supporting cache management unit; and

means for performing a third determination for whether or not to cache the fragment based on the first determination and the second determination.

12. The apparatus of claim 11 wherein the first determination further comprises:

means for retrieving from the request message a message header comprising a directive that indicates that the request message has been processed by a second computing device that has a fragment-supporting cache management unit.

13. The apparatus of claim 11, wherein the second determination further comprises:

means for retrieving from the response message a message header comprising a directive that indicates that the fragment is not to be cached by the first computing device if the second computing device has a fragment-supporting cache management unit.

14. The apparatus of claim 13 wherein the response message comprises an HTTP (Hypertext Transport Protocol) Cache-Control header with a private directive.

15. The apparatus of claim 11 further comprising:

means for storing the fragment in a cache maintained by a cache management unit within the computing device in response to the first determination being negative or the second determination being negative.

16. The apparatus of claim 11 wherein the source identifier is formatted as a URI (Uniform Resource Identifier).

17. The apparatus of claim 11 wherein the response message is an HTTP (Hypertext Transport Protocol) Response message and the request message is an HTTP request message.

18. An apparatus for processing objects within a data processing system in a network, the apparatus comprising:

means for receiving a request message at a server,

5 wherein the request message comprises a source identifier for a fragment;

means for generating a response message comprising the fragment; and

10 means for inserting in the response message a message header comprising a directive that indicates that the fragment is not to be cached by a first computing device if the first computing device is forwarding the response message to a second computing device that has a fragment-supporting cache management unit.

15 19. The apparatus of claim 18 wherein the source identifier is formatted as a URI (Uniform Resource Identifier).

20 20. The apparatus of claim 18 wherein the response message is an HTTP (Hypertext Transport Protocol) Response message and the request message is an HTTP request message.

21. A computer program product in a computer readable medium for use within a data processing system in a network for processing objects, the computer program product comprising:

5 instructions for receiving a request message at a first computing device, wherein the request message comprises a source identifier for a fragment;

10 instructions for performing a first determination for whether or not the request message has been processed by a second computing device that has a fragment-supporting cache management unit;

15 instructions for receiving a response message at the computing device, wherein the response message comprises the fragment;

20 instructions for performing a second determination for whether or not the fragment is to be cached if the computing device can determine that the second computing device has a fragment-supporting cache management unit; and

25 instructions for performing a third determination for whether or not to cache the fragment based on the first determination and the second determination.

22. The computer program product of claim 21 wherein the first determination further comprises:

30 instructions for retrieving from the request message a message header comprising a directive that indicates that the request message has been processed by a second computing device that has a fragment-supporting cache management unit.

23. The computer program product of claim 21, wherein the second determination further comprises:

instructions for retrieving from the response message a message header comprising a directive that indicates that the fragment is not to be cached by the first computing device if the second computing device has a fragment-supporting cache management unit.

24. The computer program product of claim 23 wherein the response message comprises an HTTP (Hypertext Transport Protocol) Cache-Control header with a private directive.

25. The computer program product of claim 21 further comprising:

instructions for storing the fragment in a cache maintained by a cache management unit within the computing device in response to the first determination being negative or the second determination being negative.

26. The computer program product of claim 21 wherein the source identifier is formatted as a URI (Uniform Resource Identifier).

27. The computer program product of claim 21 wherein the response message is an HTTP (Hypertext Transport Protocol) Response message and the request message is an HTTP request message.

28. A computer program product in a computer readable medium for use within a data processing system in a network for processing objects, the computer program product comprising:

instructions for receiving a request message at a server, wherein the request message comprises a source identifier for a fragment;

instructions for generating a response message comprising the fragment; and

instructions for inserting in the response message a message header comprising a directive that indicates that the fragment is not to be cached by a first computing device if the first computing device is forwarding the response message to a second computing device that has a fragment-supporting cache management unit.

29. The computer program product of claim 28 wherein the source identifier is formatted as a URI (Uniform Resource Identifier).

30. The computer program product of claim 28 wherein the response message is an HTTP (Hypertext Transport Protocol) Response message and the request message is an HTTP request message.